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ABSTRACT

This study examined the long-term effects of providing a research-based approach to classroom management through a two-phase staff development process. The process was designed to promote teachers' ability to establish and maintain effective classroom groups. Teachers' uses of group-development principles, cooperative-learning strategies, and related student outcomes were investigated. Analysis of interviews and observational data suggested the possibility that the teachers' motivation for learning to manage instruction through cooperative groups was critical to the differences in observed performance. Teachers who used group-development strategies primarily as a means of classroom management were less successful than teachers who used group-development strategies to increase student responsibility, accountability, and productivity. Results of the study indicated the importance of having a teacher support group during initial implementation of new approaches to instruction. Colleagial problem solving proved to be a key factor in the success of the project. It also appeared that staff development programs that allow both direct and indirect contact with a teacher educator can be successful in accomplishing implementation goals. (JD)

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Research Series No. 154

APPLICATIONS OF CLASSROOM MANAGEMENT RESEARCH FINDINGS

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Abstract

The purpose of this study was to examine the long-term effects of providing a research-based approach to classroom management through a two-phase staff development process. Findings indicate that teachers identified specific benefits they gained from implementing group-development and cooperative-learning strategies. The findings also indicate that classrooms of teachers who implemented most of the strategies differed from classrooms of teachers who implemented only a few. Finally, specific characteristics of the staff development experience that teachers felt contributed to their long term use of the new ideas were identified. Implications for staff development are discussed.

APPLICATIONS OF CLASSROOM MANAGEMENT RESEARCH FINDINGS[1]

Joyce G. Putnam and Henrietta Barnes[2]

Historically, teachers have always been concerned about teaching problems related to classroom management and organization. They have frequently responded to these problems with a trial and error approach in which they developed personalized methods for coping with problems after these problems occur. Sometimes their attempts were pedagogically sound and sometimes not. Teacher educators who assisted teachers with these difficult problems frequently supplied moral support, self-referenced this-worked-for-me ideas, and recommended that teachers use psychologically-based theories for responding to disruptive student behavior. How teachers and teacher educators responded to organization and classroom management problems reflected the times. First, until the late 1970's, the available research was insufficient to generate educationally sound principles or ideas for managing classrooms. Second, the focus of their responses was disruptive student behavior.

Insights gained from recent research on teaching have resulted in changes in the ways that teachers and teacher educators think about classroom management. The focus has shifted from a primary concern with discipline (responses to disruptive student behavior) to a concern for effective classroom

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[1]The writing of this paper was supported in part by the Department of Teacher Education, College of Education, Michigan State University.

[2]Joyce Putnam is a researcher with the Teacher Explanation Project and an associate professor with the Department of Teacher Education, MSU; Henrietta Barnes is chairperson of the MSU's Department of Teacher Education.

management and organization. Researchers and teacher educators can now say with confidence that there are known ways to systematically organize the classroom and provide instruction that appear to support both academic and social objectives (e.g., Anderson & Evertson, 1978; Brophy & Putnam, 1979; Doyle, 1983a; Emmer & Evertson et al., 1983, Evertson, Emmer, Clements, Sanford, Worsham & Williams, 1981; Johnson & Johnson, 1975; Kounin, 1970; Leinhardt, 1983; Slavin, 1980; Stanford, 1978). Thus a body of professional knowledge currently exists that has the potential for improving teachers' abilities to respond to a major problem of practice. The challenge confronting those concerned with educating teachers, however, is how to organize experiences for teachers that will provide the knowledge, skills, commitment, and support necessary for implementing these research-based approaches to management and instruction.

Research on staff development indicates that the contextual support that teachers receive as they attempt to implement new approaches to teaching influences the changes that occur (Little, 1981). However, few projects provide the type of support (e.g., economical, emotional, professional or time) that teachers receive from long-term, continuous personal contact with the staff developer. In some instances, this personal contact has been made possible through research projects (e.g., Roehler, Wesselman & Putnam, 1983) or state or federally funded staff development projects (e.g., Barnes, Putnam & Wanous, 1979). In general today, funds are not available for such long-term efforts either within or outside of a school district. Thus staff developers must devise ways to achieve the effects associated with long-term support in the absence of continuous personal contact with the teacher. The purpose of

this study was to examine the long-term effects on teacher behavior and attitude of providing a research-based approach to classroom management through a two-phase staff development process. Specific research questions discussed in this paper are as follows:

1. What benefits do teachers feel they have gained from implementing group development and cooperative learning strategies?

2. Are the data reported by high (people who implemented the conceptual framework and strategies) and low teacher implementers (implemented isolated strategies) reflective of their classrooms and their teaching behavior?

3. What factors do teachers feel have influenced them to continue their use of the knowledge and skills learned through the staff development experience?

The Staff Development Experience

We developed the content and process for a research-based staff development experience for inservice teachers entitled "Developing Effective Classroom Groups." (A specific outline for the course that was developed is available upon request.)

The content includes progression through five stages--orientation, norm development, coping with conflict, productivity and termination as described by Stanford (1978)--aiming toward effective group development. The productivity stage included examples of specific strategies (e.g., Jigsaw, Team Games Tournament, Student Team Achievement Divisions and the Cooperative Team Learning) described by Slavin (1983) and Johnson and Johnson (1975). These activities met the criteria for the productivity stage.

Three major assumptions guided the process for the staff development experience. First, the content included research reported by Brophy and Putnam (1979), Anderson and Evertson (1978), Johnson and Johnson (1978), and Slavin (1980) designed to help teachers produce the necessary conditions in their

classrooms for developing an effective classroom group as suggested by Stanford (1978). Second, the content teaching followed an instructional model similar to the one proposed by Joyce and Showers (1980). Third, the staff development experience required participants to plan in detail an inservice workshop that could be delivered to other teachers at their home schools.

The staff development experience consisted of a direct contact phase and an indirect contact phase. Both Phase 1 and Phase 2 contained three steps.

Phase 1: Direct contact. (1) Teacher educators provide information to participants and explain what is to be learned and why it is important, (2) they demonstrate how the principles are translated into activities and encourage participants to experience group development activities, and (3) they provide guided practice and feedback, guiding participants in planning a unit of instruction and an inservice workshop.

Phase 2: Indirect contact. Participants are to implement and systematically evaluate the previously planned unit and share findings with and receive feedback from teacher educators. Finally participants are to implement their inservice workshop plans. Table 1 details these steps.

For three years teacher educators provided the staff development experience to six separate groups of teachers at different sites. Four of the groups comprised individuals who taught in different sites and did not know one another. Two other groups included teachers who worked together in the same building or belonged to the same district. These two groups also contained subsets of individuals who did not know one another.

Analyses of the documents teachers sent to us during Phase 2 (Step 5) indicated that teachers were applying the concepts and principles they had been taught during the staff development experience. Some teachers applied only a single strategy or principle early in the school year. Others applied sequences of activities that are considered necessary for developing an

Table 1
Steps in Staff Development Experiences

Phase I: Direct Contact

	Content	Research Base
Step 1. Teacher educators provide experience that results in participants knowing what is being taught, why it is worthwhile, and how it relates to their professional goals and teaching responsibilities.	What is an effective classroom group?	Stanford, 1977
	Why develop an effective group?	Stanford & Roarke, 1974 Schmuck & Schmuck, 1975
	How can an aggregate of students become an effective group (what stages do effective groups pass through)?	Stanford, 1977
	What does a teacher do to facilitate effective group development?	Anderson, Evertson & Emmer, 1980 Brophy, 1983 Brophy & Putnam, 1979 Kounin, 1970 Stanford, 1977 Stanford & Roarke, 1974 Roehler, Schmidt, & Buchmann, 1979
Step 2. Teacher educators provide experiences that illustrate how the content is translated into practice; activities include slide presentations and simulations.	Stages of effective group development:	
	1. Orientation	Anderson & Evertson. 1978 Stanford, 1978
	2. Norm development	Emmer, Evertson, et al., 1983 Stanford, 1977 Good & Brophy, 1984 Evertson, Emmer, et al., 1981
	3. Coping with conflict	Stanford, 1977 Gordon, 1974
	4. Productivity	Stanford, 1977 Slavin, 1980 Sharan, 1980 Johnson & Johnson, 1975
	5. Termination	Stanford, 1977
Step 3. Teacher educators provide teachers with opportunity for guided practice or feedback a. long-range unit planning b. simulation trials of selected activities c. inservice workshop planning for other teachers.	Principles for selection or development of activities that will contribute to the systematic development of effective classroom groups. Content from staff development experience.	Same materials as used in previous steps.

Table 1 (continued)

Phase 2: Indirect Contact

	Purpose	Planned Outcome
Step 4. Teachers create opportunities to systematically implement new knowledge and skills (e.g., regular meetings with teacher support group).	a. Implement long-range units (planned in Phase 1). b. Document implementation process (photos, documents, tapes). c. Evaluate outcomes and experiences.	Positive experience. Organize and document changes.
Step 5. Teachers create opportunities to get feedback on implementation trials (e.g., periodic correspondence with staff development person	Send documents and a write-up to teacher educator as to the success of experiences and recommendations as to what changes teacher would make next year.	Restructure thinking Get help on solving problems. How to plan for upcoming year.
Step 6. Teachers create opportunities to tell other teachers what was learned, why it was worthwhile, and how to do it (e.g., inservice workshop for other teachers, informal sharing).	Implement inservice plan (developed in Phase 1).	Develop a clearer conceptual framework. Assess personal outcomes. Make public statement about commitment to proceed or stop

effective classroom group. To determine more specifically the effect of the staff development experience on the teachers and the nature of activities implemented in the classroom, the data collection for this study involved two steps.

Data Collection Instruments and Procedures

Teacher educators collected data from a questionnaire, follow-up interviews, and classroom observations. The questionnaire was developed to determine (a) to what extent participants were applying the content and (b) what deterred or supported application of the concepts for participants within the context of their teaching situations. Teachers who had participated in any

of the staff development experiences over the past three years received the questionnaire. A follow-up mailing was sent to the same people two months after the first.

Fifty-eight percent of the questionnaires were completed and returned. Ten percent were returned uncompleted because participants had left their jobs and provided no forwarding addresses. Thirty-two percent of the questionnaires were not returned.

Questionnaire data were tallied and analyzed to determine patterns of participant behavior. Based on the findings (see next section), a set of participants was selected for follow-up interviews and classroom observations.

A classroom observation form to be used in classrooms of teachers identified as either "high" or "low" implementers was designed by the authors to document the extent to which teachers used principles and strategies to develop effective classroom groups. These included the establishment of routines and procedures and specific cooperative learning activities. The observer also used the form to compare to what extent teachers' strategies were consistent with the research originally presented. Experts in evaluation, classroom management, and classroom observation reviewed and critiqued the observation form. The form was also piloted in classrooms of teachers who were not participating in the study.

A structured interview form was developed to determine what high and low implementors saw as

1. the salient features of the university course/staff development experience,
2. the nature of the student population they were teaching,
3. the nature of the general staff support and their work environment,
4. the characteristics of their peer support group (when they belonged to one),

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5. the nature of pupil responses to their initial attempts to implement new strategies, and

6. the nature of management problems before and after the teacher used the specific strategies.

Based on the analyses of the questionnaire data, 11 teachers were chosen to be observed and interviewed. This set included four high implementers who functioned in a support group (Group A), four high implementers who functioned as individuals (Group B), and three low implementers who functioned as individuals (Group C). The following procedures were used to establish the observation and interview schedules.

The teachers were contacted by letter and asked to meet during their lunch hour or after school with one of the authors who had previously taught them. At the sessions, the author explained that she wanted to document the effects of the teachers' instruction by observing in the classrooms and conducting follow-up interviews. All of the teachers agreed to participate. We established an observation schedule that allowed for one observation of each teacher per week with a repeat visit within the next (two observations in three consecutive weeks). A random order for observations was established by drawing the teachers' names out of a box. The structured interviews were conducted before each observation. Later, these were tallied and analyzed for response patterns that differentiated among Groups A, B, and C.

Table 2
Percentage of Group Development
and Cooperative Learning Strategies
Reported as Applied in the Classroom

Strategies and Activities	Designed during staff development and implemented in Year 1	Developed during and after staff development and and implemented in Year 2
1. Routines and Procedures	60%	75%
2. Stanford Group Development		
a. Orientation	86%	88%
b Norm development	68%	79%
c. Coping with conflict	64%	92%
d. Productivity	57%	83%
e. Termination	50%	75%
3. Specific strategies		
a. Jigsaw	14%	17%
b. TGT	7%	4%
c. STAD	4%	4%
d. Cooperative Team Learning	54%	42%

Findings

Questionnaire Data

Eighty-nine percent of the 46 teachers who returned the questionnaire reported that they used activities in their classrooms that they had developed during the staff development experience. Of these teachers, 68% reported that they not only continued to use these activities after the initial implementation, but that they also developed new activities of a similar type. Eleven percent reported they did not implement the activities they had developed.

The respondents were asked to indicate the areas in which they implemented activities or to describe the specific strategies they used. These descriptions are summarized in Table 2. Teachers reported an increase in teaching routine procedures, use of specific strategies to develop effective

classroom groups, and use of the jigsaw activity. Use of the other three cooperative learning strategies decreased or remained the same.

Teachers were asked to identify costs and benefits of implementing the concepts and specific activities. Benefits of using group development principles and cooperative learning strategies reported by teachers are summarized in Table 3. These benefits focus primarily on affective outcomes perceived by teachers. In general, the teachers reported that there were no costs to them or the students. The teachers indicated that they did not see the following items as costs: less time on task for pupils, less content covered, decrease of interactions with other teachers, decrease in student responsibility, less effective instruction, negative response from principal, increased planning time, negative response from parents, decreased self satisfaction, and decreased teacher/student relationships. Fifty percent of the teachers indicated that they had increased their planning time but that they did not view it as a cost. They insisted that they spent less time on other things such as solving discipline problems and correcting seat or practice work. One teacher reported that he had parents and students complain to him and his principal because he gave out some grades that were based on group efforts. He saw this as a problem that was resolved and not as having any cost attached to it. He said in general he had fewer parents express concern about his classes than in previous years.

As a part of the course, teachers were asked to plan an inservice workshop of any length, for any number of people, at any grade level they chose. Only one-third of the teachers indicated that they had implemented their workshop plans. It was found that approximately equal numbers of elementary, junior high, and senior high teachers attended the 15 workshops that were offered (i.e. for each of the 15 workshops, the distribution was approximately equal).

Table 3
Benefits Derived From Implementation of Group Development Principles, Cooperative Learning Strategies and/or Workshop Plan

Benefits	Percentage of Total Respondents
Increased positive response from other teachers	86
Increased self satisfaction	82
Increased study responsibilities for learning	75
Increased positive teacher/student relationships	71
Increased instructional effectiveness	71
Increased instructional efficiency	68
Improved student performance	61
Increased student satisfaction	54
Increased professional recognition	36
Increased positive response from administrators	29
Increased positive response from parents	25
Increased appreciation of group processes	4*
Increased ability to use conflict-solving skills in all areas of life	4*

* Factors added by teachers

Four workshops were attended by more than 50 people. When the 31 teachers who did not implement their workshops were asked why they hadn't, 33% cited lack of teacher interest as the primary reason. Twenty-five percent cited lack of time, 25% cited lack of administrative support, and 17% cited other reasons for not doing the workshop.

When asked to describe the kind of administrative support they received for using effective classroom group development and cooperative learning strategies, 55% of the teachers reported having "full" or "some" administrative

support. Five percent reported "no support," and 40% of the respondents did not answer this question.

Teachers were asked to indicate whether or not they had received support from other teachers since their involvement in the course. Teacher responses on this item fell primarily into two categories: those who had established and worked in a team (three teams were documented) and those who had worked as individuals. Twenty-six percent (12 teachers) of the teachers reported that they had worked on teams that had continued to meet and support team members as they attempted to use the new research-based approach to classroom management. The three teams were located in geographically different places and resulted from two specific offerings of the course. The incidence of meetings ranged from one a week to one a month.

Twenty-three of the teachers who worked as individuals indicated they had implemented effective classroom group-development and cooperative-learning strategies. Six teachers who worked as individuals reported that they used isolated cooperative-learning strategies. The rest of the teachers (5 people), for a variety of reasons, did not use strategies at all or quit using them after their initial year. Their reasons included "moving," "no longer teaching," and "changed assignments." Using these findings as a guide, 11 teachers were selected to be observed in their classrooms and to respond to follow-up interviews. Four were members of Group A, those who had worked as a group and reported implementing group-development and cooperative-learning strategies, four were teachers from Group B, those who had worked individually and similarly reported using these strategies but who used them less frequently than members of Group A, and the final three, Group C, who had worked individually and reported using only isolated strategies. Data from the structured interviews and classroom observations were collected and analyzed.

Classroom Observation and Interview Data

Eleven teachers were interviewed once for from one to one-and-one-half hours and observed twice for an hour each time in their classrooms. These teachers taught in three different English-speaking, U.S. curriculum-based schools in Taiwan. All students attending these schools paid tuition and held passports from countries other than the country in which the school was located. Teachers taught subject matter that included psychology, art, philosophy, English grammar, communications, mathematics, sciences, reading, language arts, social studies, and English as a second language in grades kindergarten through 13. The student population averaged 50% boys and 50% girls. Nationalities represented in the classroom ranged from 3 to 18.

All of the participants reported impressions that (a) the socioeconomic status of the students' families was high, (b) they had fewer students with behavior problems in their classes than the average, and (c) the cultural diversity was high in their classes. All of the teachers but one reported that their students demonstrated high verbal patterns (except for first year English-as-a-second-language students). This teacher reported that 90% of her students spoke almost no English at the beginning of the year and that three-fourths of the way through the year, their English speaking patterns were still relatively low.

The findings indicate that Group A (those who worked as a support team during the first year of implementation) differed from Group B (those who worked individually during the first year). Further, Group A and Group B teachers were both different from Group C (those who worked individually and used only isolated strategies). (See Table 4.)

Overall, there was a clear difference in the functioning of the rooms in Group A, Group B, and Group C. See Table 4 for an illustration of differences observed in the classrooms. However, all but one classroom appeared to function with relative effectiveness and efficiency.

Group C classroom observation resulted in a first general impression of a traditional teacher-directed, teacher-controlled classroom. This was coupled with an impression of fragmented activity flow. The teachers in this group reprimanded students who were disruptive. When the teachers were involved in teaching small groups, they were interrupted by students from the rest of the class three or four times within 10 minutes.

Teachers in Group C asked for new activity ideas during their interviews. One commented that she is unable to develop new ideas on her own. She said she did step by step what she read in "how to" magazines or what other teachers told her to do. She commented that most of the work in the staff development sessions had been focused on the development of activities for K-12 grades. She said only those at her specific grade level were helpful to her as she was unable to change others to make them suitable. Finally, teachers in this group reported enthusiastically about their use of materials from the course that they felt were prescriptive. Since teachers in Group C implemented only isolated cooperative learning strategies, only the data from Groups A and B are contrasted below.

Distinguishing dimensions. When interviewed, Group A teachers talked about three particular dimensions that may help to illustrate the similarities and differences between Group A and Group B.

The first dimension identifies the teachers' reasons for wanting to learn about and implement effective group-development and cooperative-learning strategies. During the interviews, Group A teachers said that their two

primary motivations for implementing the effective-group and cooperative-learning strategies were to (a) increase the students' productivity through increased responsibility and accountability and (b) enhance the levels of content understanding of their students. Teachers in Group B said they wanted to learn about and implement these strategies because they saw them as (a) valuable tools for classroom management and (b) a means for doing group work that they had tried somewhat unsuccessfully before.

Table 4
Characteristics Observed in Study Classrooms

Factors	Group A	Group B	Group C
Environment	Posters & charts signalling 4-group discussion roles	No visual cues	No visual cues
	Do's and don'ts for good discussions posted	Seasonal commercial bulletin boards	Teacher-made items
	Products from group activities	Products from individual students, academic products	Products from individual students, non-academic products
	Freedom to move, movement on task	Freedom to move, movement off task at times	No freedom to move, children move to get teacher's help
	Agenda on chalkboard	Agenda on chalkboard	Agenda on chalkboard
Routines and Procedures	Smooth	Rough	Disjointed
	Explicit	Implicit	Explicit but not always enforced
	Student and teacher initiated	Teacher cued and monitored	Teacher directed and controlled
	Student responsibility and accountability	Student accountability	

Table 4 (continued)

Factors	Group A	Group B	Group C
Rules	Focus on accountability and responsibility	Do's and don'ts as stated by teachers	List of specific don'ts
	Student judgement required	Trial and error	Not always what is stated
Activities and Type	Novelty through variety	Novelty through change in group membership	Novelty based on teacher's feelings
	Freedom of choice TGT, STAD, Jigsaw, Cooperative Team Learning	No choice Jigsaw, Cooperative Team Learning	No choice Traditional teacher-directed strategies or seatwork
	Teacher-developed whole and small group discussion or question/answer	Teacher-directed whole and small group discussion or question/answer	Whole group, teacher asks and pupils respond
	Teacher or student directed	Teacher directed	Teacher directed
Nature of Group Work	Four discussion roles implemented interchangeably by students (encouraging, informing, linking, organizing)	Appointed set roles, no use of encouraging role	No roles implemented
	Student processing of activities, products and achievement	No student processing	No student processing
	Group monitored pacing and productivity	Teacher monitored pacing and productivity (limited by assignments)	Teacher monitored
	All students participate	A few students don't particpate	Students participate under teacher direction
	Continuous task involvement	On and off task involvement	Off task behavior by students doing seatwork

Teachers in Group A indicated high levels of awareness of tensions and difficulties in orienting students to new ways to think about their participation in classroom learning during the first implementation year. These teachers communicated a strong commitment to working with strategies over an extended period until they knew that something definitely would or would not work and that they could or could not teach it to their students. Consistent with their determination that students would learn responsibility and accountability, they persisted in teaching these behaviors.

They described their struggles in keeping the focus on the students' learning what they needed to do. They did not accept total responsibility for solving problems that occurred as students learned how to work together. Instead, those teachers talked with pupils about how they could handle such problems themselves.

Group A teachers reported that they worked to convince (a) "bright" students that there was a payoff for them in collaborating with peers, (b) "slower" students to do their share of the work, and (c) all students that they shared responsibility for success. Group A teachers resisted temptations to rescue students in order to have quick results, greater comfort, and the appearance of success.

Group B teachers, who were using strategies primarily for classroom management in the first place, reported a tendency to assume responsibility for maintaining the flow of the activities and thus appeared to circumvent the problems that are likely to occur when teaching students responsibility and accountability. Regarding motivation, Group A teachers focused on student outcomes, and Group B teachers on management strategies and activity flow.

The second dimension focuses on the teachers' self awareness. Teachers in Group A volunteered self-critical comments about their own lack of clarity in giving directions, on stating their expectations, the unintended messages they may have sent students, and other ways they felt they might have slowed their students' progress during the first year of implementation. Group B teachers volunteered no self-critical information and in no way indicated to the researcher any awareness that they may have contributed to problems in their first year implementation.

Directly related to this dimension were the teachers' perceptions of their students' behavior during the first year. Teachers in Group A reported that during the first year they implemented their new strategies, their students appeared to be confused about their responsibilities, asked frequent questions about what they were doing, and appeared to test the teachers' new expectations. They also felt that their students did not go along with their new ideas without question. These teachers further reported that when problems occurred, they responded by clarifying, modeling, role playing, and teaching the students how to behave differently.

Three of the four teachers in Group B reported that their students were not confused about their responsibilities and tended to go along with the new strategies. The fourth teacher reported having a great deal of difficulty with both parents and students concerning a new grading policy he had developed based on group effort. The problem was resolved by a mandate from the principal. The teacher then developed a new policy for grading and reported no new problems after that.

In the second dimension, self awareness, the teachers in Group A perceived that their students were having problems and that they might have personally contributed to these problems. Teachers in Group B generally did not report

problems of student confusion, nor did they suggest that they as teachers might have contributed to any of the difficulties they had experienced.

The third dimension identifies factors that teachers saw as influencing their ability to develop effective classroom groups. During the interview, teachers were asked to rate items that had influenced them. The first set of factors concerned the staff development activities in which the teachers had participated. The second set of factors pertained to the nature and level of collegial support they had received.

Table 5 shows how teachers in both groups ranked each of the 11 factors related to the staff development experience. Groups A and B ranked the experiences differently. Group B generally ranked all factors lower than they were ranked by Group A.

Group A teachers unanimously rated participation in a support group as being highly influential in their success. Group B teachers reported that they had not talked to other teachers about what they were doing. Table 6 shows how the teachers in Group A ranked the factors related to the support team in which they were members. The teachers were asked to rate each factor on a scale of 1 (no contribution) to 7 (critical contribution) in terms of its contribution to their success. All members of Group A identified 6 of the 10 factors as being critical factors to the successful implementation of their new knowledge and skills. The remaining three factors were ranked as critical by three of the members, with one individual rating them lower.

While the teachers did not discriminate among the factors as they rated them, the probing questions in the interview resulted in the identification of three factors that seemed to be more influential: First, the support group met weekly; second, the meetings became a forum for discussing and solving any type of problem a member wished to discuss; and third, everyone saw everyone else

Table 5

Individual Teacher Ranking

Factors in Staff Development Experience													
Conceptual framework for organizing (Five Stages)	5	6	7	7	6.25	4	5	3	5	4.25	5	5	5	5.00
Hearing multiple research findings	7	7	5	1	5.00	6	5	6	6	5.75	6	3	4	4.33
Reading research articles	6	5	7	5	5.75	6	3	6	6	5.25	7	3	4	4.67
Discussing the implications of research findings for classrooms (whole group)	6	5	7	6	6.00	3	7	7	6	5.75	6	4	5	5.00
Powerfulness of research findings studied in class	7	7	7	7	7.00	6	4	4	6	5.00	5	4	7	5.67
Small group discussions (research implications and practical ideas)	5	5	7	X	5.67	2	6	5	6	4.75	5	3	5	4.33
Participating in course activities similar to those to be used with pupils (Stages 1 & 2)	7	7	7	7	7.00	6	5	6	6	5.75	5	6	5	5.33
Developing a plan as part of course to implement	7	7	7	7	7.00	6	2	6	7	5.25	7	4	4	5.00
Getting feedback on your plan	1	7	7	X	5.00	4	2	6	6	4.50	6	X	4	5.00
Organizing a workshop for other teachers	7	8	7	7	7.25	2	5	3	2	3.00	5	X	4	4.50
Use of cooperative learning strategies in teaching course content (Reading Assignments)	7	7	7	7	7.00	6	5	5	6	5.50	1	X	4	2.50

X - Don't recall

Table 6
Perceptions of the Value of Support Group Characteristics: Group A

Weekly meetings	7777	Having long term group goal (inservice)	7777
Reporting to each other	7777	Hearing corrective feedback (another perspective)	7777
Empathy of members due to their knowledge of how much you were investing	7777	Opportunities to share problems in a safe setting	7777
Problem solving opportunities	7377	Shared belief that new concept was worthwhile	7777
Opportunities to share success without embarrassment	7776	Feedback from peers on what you are doing	7757

teach (via video tape). The support group does not meet formally any more because its members reached their stated goal and have moved on to other projects. However, the group's members have maintained highly visible professional and social relationships.

In addition to the three dimensions described above (motivation, self awareness and influences), characteristics related to (1) classroom environment, (2) routines and procedures, (3) rules, (4) activities, (5) types of activity and (6) nature of group work also illustrated the differences among the three groups of teachers. See Table 4 for illustration of group differences in these six categories. To identify further distinctions between Groups A and B, examples from three categories (environments, routines and procedures, and nature of group work) will be cited.

First, teachers in Group A prominently displayed in the room posters reminding students about discussion group roles and products of student group work. Teachers in Group B rooms did not display such reminders or group

products. Occasionally, they displayed commercial or seasonal materials, like fall pictures related to social studies text, but the bulletin boards were generally devoid of decoration. When it came to classroom routines and procedures, the classrooms of Group A teachers were characterized by student-initiated and student-monitored routines and procedures. Routines and procedures in the classrooms of teachers in Group B were teacher-initated and teacher-monitored.

Finally, the nature of group work in Group A classrooms was different from that in Group B or C classrooms. In these rooms, students used all four discussion group roles interchangeably (organizer, linker, encourager, informer). Students also critically processed the discussions or work sessions in which they participated. In Group B classrooms, the organizer role was appointed by the teacher. The informing and linking roles were observed but no use of the encouraging role was observed. Also no group processing of their group work by teacher and/or students was noted.

In general, the classrooms of teachers in Groups A and B were well organized and operated smoothly. In Group A classrooms, little effort or time was spent on management by either teachers or students. Group B classrooms were organized more loosely with more off-task student behavior than was observed in Group A classrooms. In this set of rooms, teachers spent a major part of the their time keeping the process going and checking to see if students were on task.

Discussion

This study investigated the effects on teacher behavior and attitude of a two-phase staff development project designed to promote teachers' ability to establish and maintain effective classroom groups. The study examined differences in teachers' uses of group-development principles and

cooperative-learning strategies and related student outcomes. Analyses of interviews and observational data suggest the possibility that the teacher's motivation for learning to manage instruction through cooperative groups is critical to the differences in observed performance. Teachers who use group-development strategies primarily as a means of classroom management are less successful than teachers who use group-development strategies to increase student responsibility, accountability, and productivity. It may be that the desire for maintaining order and control of classroom activity increases the likelihood that the teacher will intervene when groups get bogged down. By inadvertently maintaining control of the flow of group work, the teacher may fail to help students develop a sense of shared responsibility for group productivity.

Results of this study indicate the importance of having a teacher support group during initial implementation of new approaches to instruction. The opportunity to talk regularly with trusted colleagues who share similar problems and concerns during this critical period is highlighted by this study. It appears likely that the empathic problem solving that can occur among colleagues allows individual teachers to consider many aspects of problems that result when students and teachers are unfamiliar with new approaches to learning. When teachers have such support, they appear to be more critical of ways they may be inhibiting the progress of groups and, therefore, more willing to explore ways to improve group functioning. Thus they may be better able to stay with the new approach long enough to allow for the necessary student-teacher learning to be developed.

Thus it appears that staff development programs that allow both direct and indirect contact with a teacher educator can be successful in accomplishing implementation goals. When a staff development project (a) provides sufficient

motivation for teachers to implement what they have been taught, (b) allows teachers to personally experience the benefits of what they implement, and (c) encourages the continuation of teacher support groups during initial implementation, it can be expected to be successful even when the staff developer is no longer directly involved with the teachers.

While this strategy appeared successful for 90% of the teachers, it was demonstrably more effective with teachers in Groups A and B. With Group C and members of Group D who were teaching but had changed grade level or content areas (17%) the strategy was not successful. It is not possible from this study to determine what staff development elements might be necessary in order to acquire a more uniform adaptation. However, it may be that teachers in Groups C and D are the ones who need to have a staff development person work side by side with them when changes in teacher behavior are desireable.

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